

**ATTACHMENT A**

**Marked-up version showing changes to: Page 5, line 19, to page 6, line 2.**

FIG. 1 shows a cut away side view of the reaction vessel 14 showing a stack of vials 24 progressing through longitudinal reaction chamber 32. FIG. [1 also] 3 shows an electronic heating jacket 102 encompassing chamber 32. FIG. 3 further shows jacket 102 in combination with a structure for controlling temperature conditions within the chamber 32. The structure includes insulation 104 interposed within jacket 102, a high precision temperature measuring device 106, and a feedback heat controller 108. Examples of the high precision temperature measuring device include a thermocouple, thermistor, or platinum resistance thermometer. Heat controller 108 is attached to the interior of chamber 32 by leads 110. Electronic heating jacket 102 is shown with feedback control via temperature measuring device 106, which can be a probe, and heat controller 108. Other combinations can be used to control the temperature in chamber 32 such as a vapor heating jacket with pressure control, so long as the temperature can be controlled to within  $\pm 2^{\circ}\text{C}$ , desirably within  $\pm 1^{\circ}\text{C}$  and preferably within  $\pm 0.5^{\circ}\text{C}$ .

**Marked-up version showing changes to: Page 6, lines 15-27:**

Each thin film formulation is deposited into a vial 24 to provide an array of reaction vials 24. Vial 24 is preferably formed of a rigid material that is chemically inert in the reaction environment. An example of an acceptable vial for many reactions is a glass vial. When dealing with liquids with low vapor pressures or with lengthy reactions, it may be desirable to provide a covering, such as a selectively permeable cap [16] or a septum (not shown) incorporating a feed tube or needle disposed such that a gas is allowed to move freely into and out of vial 24 while depletion of liquid by evaporation is minimized. This arrangement allows an external pressure source to act upon the gas in the reactant environment while evaporation of liquid is limited. In most applications, suitable materials for the cap include polytetrafluoroethylene (PTFE) and expanded PTFE. A suitable cap for use with 2 ml glass vials is "Clear Snap Cap, PTFE/Silicone/PTFE with Starburst, 11mm", part no. 27428, available from Supelco, Inc., Bellefonte, Pennsylvania.

**Marked-up version showing changes to: Page 39, insert the following centered heading at top of page:**

TABLE 12

**Marked-up version showing changes to: Page 39, insert the following successive column headings over the columns, left to right:**

Block

M1

M1 amt.

M2

M2 amt.

CS

CS amt.

Pressure

Temperature

Time

TON

**Marked-up version showing changes to: Pages 45-47, Table 14 after the table heading, cancel entirely and replace by the following.**

<u>Source</u>	<u>DF</u>	<u>Seq SS</u>	<u>Adj SS</u>	<u>Adj MS</u>	<u>F Ratio</u>	<u>P</u>	<u>Significant at P&lt;0.01</u>
<u>M1 amt</u>	<u>1</u>	<u>16412</u>	<u>16412</u>	<u>16412</u>	<u>0.201</u>	<u>0.654</u>	
<u>M2 amt</u>	<u>1</u>	<u>77926</u>	<u>77926</u>	<u>77926</u>	<u>0.954</u>	<u>0.329</u>	
<u>CS amt</u>	<u>1</u>	<u>33586</u>	<u>33586</u>	<u>33586</u>	<u>0.411</u>	<u>0.522</u>	
<u>Pressure</u>	<u>1</u>	<u>4616039</u>	<u>4616039</u>	<u>4616039</u>	<u>56.526</u>	<u>0.000</u>	<u>YES</u>
<u>Temperature</u>	<u>1</u>	<u>216802139</u>	<u>216802139</u>	<u>216802139</u>	<u>2654.854</u>	<u>0.000</u>	<u>YES</u>

<u>Time</u>	1	31205785	31205785	31205785	382.131	0.000	<u>YES</u>
<u>M1</u>	1	<u>22404811</u>	<u>22404811</u>	<u>22404811</u>	<u>274.358</u>	<u>0.000</u>	<u>YES</u>
<u>M2</u>	1	<u>182205</u>	<u>182205</u>	<u>182205</u>	<u>2.231</u>	<u>0.136</u>	
<u>CS</u>	1	<u>3702</u>	<u>3702</u>	<u>3702</u>	<u>0.045</u>	<u>0.832</u>	
<u>M1 amt*M2 amt</u>	1	<u>27036</u>	<u>27036</u>	<u>27036</u>	<u>0.331</u>	<u>0.565</u>	
<u>M1 amt*CS amt</u>	1	<u>58292</u>	<u>58292</u>	<u>58292</u>	<u>0.714</u>	<u>0.399</u>	
<u>M1 amt*Pressure</u>	1	<u>61467</u>	<u>61467</u>	<u>61467</u>	<u>0.753</u>	<u>0.386</u>	
<u>M1 amt*Temperature</u>	1	<u>26926</u>	<u>26926</u>	<u>26926</u>	<u>0.330</u>	<u>0.566</u>	
<u>M1 amt*Time</u>	1	<u>110415</u>	<u>110415</u>	<u>110415</u>	<u>1.352</u>	<u>0.246</u>	
<u>M1 amt*M1</u>	1	<u>34335</u>	<u>34335</u>	<u>34335</u>	<u>0.420</u>	<u>0.517</u>	
<u>M1 amt*M2</u>	1	<u>232680</u>	<u>232680</u>	<u>232680</u>	<u>2.849</u>	<u>0.092</u>	
<u>M1 amt*CS</u>	1	<u>260446</u>	<u>260446</u>	<u>260446</u>	<u>3.189</u>	<u>0.075</u>	
<u>M2 amt*CS amt</u>	1	<u>79627</u>	<u>79627</u>	<u>79627</u>	<u>0.975</u>	<u>0.324</u>	
<u>M2 amt*Pressure</u>	1	<u>341447</u>	<u>341447</u>	<u>341447</u>	<u>4.181</u>	<u>0.042</u>	
<u>M2 amt*Temperature</u>	1	<u>477</u>	<u>477</u>	<u>477</u>	<u>0.006</u>	<u>0.939</u>	
<u>M2 amt*Time</u>	1	<u>125869</u>	<u>125869</u>	<u>125869</u>	<u>1.541</u>	<u>0.215</u>	
<u>M2 amt*M1</u>	1	<u>14190</u>	<u>14190</u>	<u>14190</u>	<u>0.174</u>	<u>0.677</u>	
<u>M2 amt*M2</u>	1	<u>81553</u>	<u>81553</u>	<u>81553</u>	<u>0.999</u>	<u>0.318</u>	
<u>M2 amt*CS</u>	1	<u>8125</u>	<u>8125</u>	<u>8125</u>	<u>0.099</u>	<u>0.753</u>	
<u>CS amt*Pressure</u>	1	<u>33749</u>	<u>33749</u>	<u>33749</u>	<u>0.413</u>	<u>0.521</u>	
<u>CS amt*Temperature</u>	1	<u>295416</u>	<u>295416</u>	<u>295416</u>	<u>3.618</u>	<u>0.058</u>	
<u>CS amt*Time</u>	1	<u>7438</u>	<u>7438</u>	<u>7438</u>	<u>0.091</u>	<u>0.763</u>	
<u>CS amt*M1</u>	1	<u>132568</u>	<u>132568</u>	<u>132568</u>	<u>1.623</u>	<u>0.203</u>	
<u>CS amt*M2</u>	1	<u>37280</u>	<u>37280</u>	<u>37280</u>	<u>0.457</u>	<u>0.500</u>	
<u>CS amt*CS</u>	1	<u>23702</u>	<u>23702</u>	<u>23702</u>	<u>0.290</u>	<u>0.590</u>	
<u>Pressure*Temperature</u>	1	<u>40272</u>	<u>40272</u>	<u>40272</u>	<u>0.493</u>	<u>0.483</u>	
<u>Pressure*Time</u>	1	<u>38</u>	<u>38</u>	<u>38</u>	<u>0.000</u>	<u>0.983</u>	
<u>Pressure*M1</u>	1	<u>253770</u>	<u>253770</u>	<u>253770</u>	<u>3.108</u>	<u>0.079</u>	
<u>Pressure*M2</u>	1	<u>260899</u>	<u>260899</u>	<u>260899</u>	<u>3.195</u>	<u>0.075</u>	
<u>Pressure*CS</u>	1	<u>11954</u>	<u>11954</u>	<u>11954</u>	<u>0.146</u>	<u>0.702</u>	
<u>Temperature*Time</u>	1	<u>33291520</u>	<u>33291520</u>	<u>33291520</u>	<u>407.672</u>	<u>0.000</u>	<u>YES</u>
<u>Temperature*M1</u>	1	<u>43430</u>	<u>43430</u>	<u>43430</u>	<u>0.532</u>	<u>0.466</u>	
<u>Temperature*M2</u>	1	<u>94767</u>	<u>94767</u>	<u>94767</u>	<u>1.160</u>	<u>0.282</u>	
<u>Temperature*CS</u>	1	<u>90412</u>	<u>90412</u>	<u>90412</u>	<u>1.107</u>	<u>0.293</u>	
<u>Time*M1</u>	1	<u>1491</u>	<u>1491</u>	<u>1491</u>	<u>0.018</u>	<u>0.893</u>	
<u>Time*M2</u>	1	<u>93605</u>	<u>93605</u>	<u>93605</u>	<u>1.146</u>	<u>0.285</u>	
<u>Time*CS</u>	1	<u>76043</u>	<u>76043</u>	<u>76043</u>	<u>0.931</u>	<u>0.335</u>	
<u>M1*M2</u>	1	<u>77799</u>	<u>77799</u>	<u>77799</u>	<u>0.953</u>	<u>0.330</u>	
<u>M1*CS</u>	1	<u>169760</u>	<u>169760</u>	<u>169760</u>	<u>2.079</u>	<u>0.150</u>	
<u>M2*CS</u>	1	<u>407136</u>	<u>407136</u>	<u>407136</u>	<u>4.986</u>	<u>0.026</u>	
<u>M1 amt*M2 amt*CS amt</u>	1	<u>361079</u>	<u>361079</u>	<u>361079</u>	<u>4.422</u>	<u>0.036</u>	
<u>M1 amt*M2 amt*Pressure</u>	1	<u>21432</u>	<u>21432</u>	<u>21432</u>	<u>0.262</u>	<u>0.609</u>	
<u>M1 amt*M2</u>	1	<u>271</u>	<u>271</u>	<u>271</u>	<u>0.003</u>	<u>0.954</u>	
<u>amt*Temperature</u>							
<u>M1 amt*M2 amt*Time</u>	1	<u>13991</u>	<u>13991</u>	<u>13991</u>	<u>0.171</u>	<u>0.679</u>	
<u>M1 amt*M2 amt*M1</u>	1	<u>281433</u>	<u>281433</u>	<u>281433</u>	<u>3.446</u>	<u>0.064</u>	
<u>M1 amt*M2 amt*M2</u>	1	<u>1</u>	<u>1</u>	<u>1</u>	<u>0.000</u>	<u>0.997</u>	

<u>M1 amt*M2 amt*CS</u>	<u>1</u>	<u>116073</u>	<u>116073</u>	<u>116073</u>	<u>1.421</u>	<u>0.234</u>
<u>M1 amt*CS amt*Pressure</u>	<u>1</u>	<u>114627</u>	<u>114627</u>	<u>114627</u>	<u>1.404</u>	<u>0.237</u>
<u>M1 amt*CS</u>	<u>1</u>	<u>466</u>	<u>466</u>	<u>466</u>	<u>0.006</u>	<u>0.940</u>
<u>amt*Temperature</u>						
<u>M1 amt*CS amt*Time</u>	<u>1</u>	<u>69157</u>	<u>69157</u>	<u>69157</u>	<u>0.847</u>	<u>0.358</u>
<u>M1 amt*CS amt*M1</u>	<u>1</u>	<u>164860</u>	<u>164860</u>	<u>164860</u>	<u>2.019</u>	<u>0.156</u>
<u>M1 amt*CS amt*M2</u>	<u>1</u>	<u>14698</u>	<u>14698</u>	<u>14698</u>	<u>0.180</u>	<u>0.672</u>
<u>M1 amt*CS amt*CS</u>	<u>1</u>	<u>334131</u>	<u>334131</u>	<u>334131</u>	<u>4.092</u>	<u>0.044</u>
<u>M1</u>	<u>1</u>	<u>235</u>	<u>235</u>	<u>235</u>	<u>0.003</u>	<u>0.957</u>
<u>amt*Pressure*Temperature</u>						
<u>M1 amt*Pressure*Time</u>	<u>1</u>	<u>167809</u>	<u>167809</u>	<u>167809</u>	<u>2.055</u>	<u>0.153</u>
<u>M1 amt*Pressure*M1</u>	<u>1</u>	<u>8172</u>	<u>8172</u>	<u>8172</u>	<u>0.100</u>	<u>0.752</u>
<u>M1 amt*Pressure*M2</u>	<u>1</u>	<u>4377</u>	<u>4377</u>	<u>4377</u>	<u>0.054</u>	<u>0.817</u>
<u>M1 amt*Pressure*CS</u>	<u>1</u>	<u>6356</u>	<u>6356</u>	<u>6356</u>	<u>0.078</u>	<u>0.780</u>
<u>M1</u>	<u>1</u>	<u>67161</u>	<u>67161</u>	<u>67161</u>	<u>0.822</u>	<u>0.365</u>
<u>amt*Temperature*Time</u>						
<u>M1 amt*Temperature*M1</u>	<u>1</u>	<u>194664</u>	<u>194664</u>	<u>194664</u>	<u>2.384</u>	<u>0.123</u>
<u>M1 amt*Temperature*M2</u>	<u>1</u>	<u>569</u>	<u>569</u>	<u>569</u>	<u>0.007</u>	<u>0.934</u>
<u>M1 amt*Temperature*CS</u>	<u>1</u>	<u>11</u>	<u>11</u>	<u>11</u>	<u>0.000</u>	<u>0.991</u>
<u>M1 amt*Time*M1</u>	<u>1</u>	<u>6489</u>	<u>6489</u>	<u>6489</u>	<u>0.079</u>	<u>0.778</u>
<u>M1 amt*Time*M2</u>	<u>1</u>	<u>30862</u>	<u>30862</u>	<u>30862</u>	<u>0.378</u>	<u>0.539</u>
<u>M1 amt*Time*CS</u>	<u>1</u>	<u>163612</u>	<u>163612</u>	<u>163612</u>	<u>2.004</u>	<u>0.158</u>
<u>M1 amt*M1*M2</u>	<u>1</u>	<u>77397</u>	<u>77397</u>	<u>77397</u>	<u>0.948</u>	<u>0.331</u>
<u>M1 amt*M1*CS</u>	<u>1</u>	<u>11421</u>	<u>11421</u>	<u>11421</u>	<u>0.140</u>	<u>0.709</u>
<u>M1 amt*M2*CS</u>	<u>1</u>	<u>59409</u>	<u>59409</u>	<u>59409</u>	<u>0.727</u>	<u>0.394</u>
<u>M2 amt*CS amt*Pressure</u>	<u>1</u>	<u>6344</u>	<u>6344</u>	<u>6344</u>	<u>0.078</u>	<u>0.781</u>
<u>M2 amt*CS</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0.000</u>	<u>1.000</u>
<u>amt*Temperature</u>						
<u>M2 amt*CS amt*Time</u>	<u>1</u>	<u>70019</u>	<u>70019</u>	<u>70019</u>	<u>0.857</u>	<u>0.355</u>
<u>M2 amt*CS amt*M1</u>	<u>1</u>	<u>89887</u>	<u>89887</u>	<u>89887</u>	<u>1.101</u>	<u>0.295</u>
<u>M2 amt*CS amt*M2</u>	<u>1</u>	<u>120523</u>	<u>120523</u>	<u>120523</u>	<u>1.476</u>	<u>0.225</u>
<u>M2 amt*CS amt*CS</u>	<u>1</u>	<u>8479</u>	<u>8479</u>	<u>8479</u>	<u>0.104</u>	<u>0.747</u>
<u>M2</u>	<u>1</u>	<u>190090</u>	<u>190090</u>	<u>190090</u>	<u>2.328</u>	<u>0.128</u>
<u>amt*Pressure*Temperature</u>						
<u>M2 amt*Pressure*Time</u>	<u>1</u>	<u>14716</u>	<u>14716</u>	<u>14716</u>	<u>0.180</u>	<u>0.671</u>
<u>M2 amt*Pressure*M1</u>	<u>1</u>	<u>7373</u>	<u>7373</u>	<u>7373</u>	<u>0.090</u>	<u>0.764</u>
<u>M2 amt*Pressure*M2</u>	<u>1</u>	<u>16357</u>	<u>16357</u>	<u>16357</u>	<u>0.200</u>	<u>0.655</u>
<u>M2 amt*Pressure*CS</u>	<u>1</u>	<u>35027</u>	<u>35027</u>	<u>35027</u>	<u>0.429</u>	<u>0.513</u>
<u>M2</u>	<u>1</u>	<u>26831</u>	<u>26831</u>	<u>26831</u>	<u>0.329</u>	<u>0.567</u>
<u>amt*Temperature*Time</u>						
<u>M2 amt*Temperature*M1</u>	<u>1</u>	<u>626</u>	<u>626</u>	<u>626</u>	<u>0.008</u>	<u>0.930</u>
<u>M2 amt*Temperature*M2</u>	<u>1</u>	<u>94448</u>	<u>94448</u>	<u>94448</u>	<u>1.157</u>	<u>0.283</u>
<u>M2 amt*Temperature*CS</u>	<u>1</u>	<u>1212</u>	<u>1212</u>	<u>1212</u>	<u>0.015</u>	<u>0.903</u>
<u>M2 amt*Time*M1</u>	<u>1</u>	<u>77055</u>	<u>77055</u>	<u>77055</u>	<u>0.944</u>	<u>0.332</u>
<u>M2 amt*Time*M2</u>	<u>1</u>	<u>6233</u>	<u>6233</u>	<u>6233</u>	<u>0.076</u>	<u>0.782</u>
<u>M2 amt*Time*CS</u>	<u>1</u>	<u>337817</u>	<u>337817</u>	<u>337817</u>	<u>4.137</u>	<u>0.043</u>
<u>M2 amt*M1*M2</u>	<u>1</u>	<u>38653</u>	<u>38653</u>	<u>38653</u>	<u>0.473</u>	<u>0.492</u>

<u>M2 amt*M1*CS</u>	1	<u>23751</u>	<u>23751</u>	<u>23751</u>	<u>0.291</u>	<u>0.590</u>	
<u>M2 amt*M2*CS</u>	1	<u>3270</u>	<u>3270</u>	<u>3270</u>	<u>0.040</u>	<u>0.842</u>	
<u>CS</u>	1	<u>84561</u>	<u>84561</u>	<u>84561</u>	<u>1.035</u>	<u>0.310</u>	
<u>amt*Pressure*Temperature</u>							
<u>CS amt*Pressure*Time</u>	1	<u>212868</u>	<u>212868</u>	<u>212868</u>	<u>2.607</u>	<u>0.107</u>	
<u>CS amt*Pressure*M1</u>	1	<u>34495</u>	<u>34495</u>	<u>34495</u>	<u>0.422</u>	<u>0.516</u>	
<u>CS amt*Pressure*M2</u>	1	<u>20299</u>	<u>20299</u>	<u>20299</u>	<u>0.249</u>	<u>0.618</u>	
<u>CS amt*Pressure*CS</u>	1	<u>12034</u>	<u>12034</u>	<u>12034</u>	<u>0.147</u>	<u>0.701</u>	
<u>CS</u>	1	<u>174636</u>	<u>174636</u>	<u>174636</u>	<u>2.139</u>	<u>0.144</u>	
<u>amt*Temperature*Time</u>							
<u>CS amt*Temperature*M1</u>	1	<u>535239896</u>	<u>535239896</u>	<u>535239896</u>	<u>6554.288</u>	<u>0.000</u>	<u>YES</u>
<u>CS amt*Temperature*M2</u>	1	<u>4708</u>	<u>4708</u>	<u>4708</u>	<u>0.058</u>	<u>0.810</u>	
<u>CS amt*Temperature*CS</u>	1	<u>331</u>	<u>331</u>	<u>331</u>	<u>0.004</u>	<u>0.949</u>	
<u>CS amt*Time*M1</u>	1	<u>112874</u>	<u>112874</u>	<u>112874</u>	<u>1.382</u>	<u>0.240</u>	
<u>CS amt*Time*M2</u>	1	<u>1469</u>	<u>1469</u>	<u>1469</u>	<u>0.018</u>	<u>0.893</u>	
<u>CS amt*Time*CS</u>	1	<u>804</u>	<u>804</u>	<u>804</u>	<u>0.010</u>	<u>0.921</u>	
<u>CS amt*M1*M2</u>	1	<u>75785</u>	<u>75785</u>	<u>75785</u>	<u>0.928</u>	<u>0.336</u>	
<u>CS amt*M1*CS</u>	1	<u>22036</u>	<u>22036</u>	<u>22036</u>	<u>0.270</u>	<u>0.604</u>	
<u>CS amt*M2*CS</u>	1	<u>34743</u>	<u>34743</u>	<u>34743</u>	<u>0.425</u>	<u>0.515</u>	
<u>Pressure*Temperature*Ti</u>	1	<u>950930</u>	<u>950930</u>	<u>950930</u>	<u>11.645</u>	<u>0.001</u>	<u>YES</u>
<u>me</u>							
<u>Pressure*Temperature*M1</u>	1	<u>18226</u>	<u>18226</u>	<u>18226</u>	<u>0.223</u>	<u>0.637</u>	
<u>Pressure*Temperature*M2</u>	1	<u>11544</u>	<u>11544</u>	<u>11544</u>	<u>0.141</u>	<u>0.707</u>	
<u>Pressure*Temperature*CS</u>	1	<u>67428</u>	<u>67428</u>	<u>67428</u>	<u>0.826</u>	<u>0.364</u>	
<u>Pressure*Time*M1</u>	1	<u>310071</u>	<u>310071</u>	<u>310071</u>	<u>3.797</u>	<u>0.052</u>	
<u>Pressure*Time*M2</u>	1	<u>10784</u>	<u>10784</u>	<u>10784</u>	<u>0.132</u>	<u>0.717</u>	
<u>Pressure*Time*CS</u>	1	<u>2008</u>	<u>2008</u>	<u>2008</u>	<u>0.025</u>	<u>0.875</u>	
<u>Pressure*M1*M2</u>	1	<u>12343</u>	<u>12343</u>	<u>12343</u>	<u>0.151</u>	<u>0.698</u>	
<u>Pressure*M1*CS</u>	1	<u>14220</u>	<u>14220</u>	<u>14220</u>	<u>0.174</u>	<u>0.677</u>	
<u>Pressure*M2*CS</u>	1	<u>67936</u>	<u>67936</u>	<u>67936</u>	<u>0.832</u>	<u>0.362</u>	
<u>Temperature*Time*M1</u>	1	<u>221695</u>	<u>221695</u>	<u>221695</u>	<u>2.715</u>	<u>0.100</u>	
<u>Temperature*Time*M2</u>	1	<u>38</u>	<u>38</u>	<u>38</u>	<u>0.000</u>	<u>0.983</u>	
<u>Temperature*Time*CS</u>	1	<u>10</u>	<u>10</u>	<u>10</u>	<u>0.000</u>	<u>0.991</u>	
<u>Temperature*M1*M2</u>	1	<u>24040</u>	<u>24040</u>	<u>24040</u>	<u>0.294</u>	<u>0.588</u>	
<u>Temperature*M1*CS</u>	1	<u>257092</u>	<u>257092</u>	<u>257092</u>	<u>3.148</u>	<u>0.077</u>	
<u>Temperature*M2*CS</u>	1	<u>848</u>	<u>848</u>	<u>848</u>	<u>0.010</u>	<u>0.919</u>	
<u>Time*M1*M2</u>	1	<u>53303</u>	<u>53303</u>	<u>53303</u>	<u>0.653</u>	<u>0.420</u>	
<u>Time*M1*CS</u>	1	<u>44080</u>	<u>44080</u>	<u>44080</u>	<u>0.540</u>	<u>0.463</u>	
<u>Time*M2*CS</u>	1	<u>7295</u>	<u>7295</u>	<u>7295</u>	<u>0.089</u>	<u>0.765</u>	
<u>M1*M2*CS</u>	1	<u>319669</u>	<u>319669</u>	<u>319669</u>	<u>3.915</u>	<u>0.049</u>	
<u>Error</u>	382	<u>31195094</u>	<u>31195094</u>	<u>81662.55</u>			
<u>Total</u>	511	<u>885328201</u>					